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ABSTRACT

This study describes models of diffusion that combine the efforts of a State agency with the efforts of local school systems to effect change and examines the most recent research on innovation adoption. It provides a paradigm that describes the following elements: (1) the optimum installation process for an innovation, (2) the kinds of school system environments most conducive to adopting innovations, (3) State and local support strategies that most frequently result in adoption, (4) the most effective leadership styles for diffusers, and (5) the kinds of evaluation and dissemination techniques that work best. Data is keyed to local and State facilitators of change efforts. (Author/MLF)

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WHAT MAKES INNOVATION WORK IN MASSACHUSETTS?:

Strategies for State and Local Systems

A Paper Presented to the

American Educational Research Association Conference

Washington, D.C., 1975

by

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The state of knowledge about planned change has advanced markedly in the past decade. Years of trial and error plus that increased federal, state and private funding of research and programmatic efforts in the area of innovation have provided a wealth of experience and data that is impressive. Yet those of us sitting at the state level see local districts still struggling in sometimes painfully contorted ways to develop ideas. We see exciting programs fail when we thought they had every chance of success. And we see other programs succeed when we thought they were certain to fail. In response, we establish new proposal funding criteria; we provide technical assistance and other kinds of programmatic support; we try to create statewide models for others to emulate; and then we cross our fingers and hope. But that has simply not been enough.

We need more sound strategies--"firmly rooted in practice," as Matthew Miles described at last year's AERA meeting--that state and local systems can realistically employ. The impressive abundance of research literature on planned change is often lacking in "what's really happening at the implementation level" and more concerned with "what ought to be going on." *(Miles, 1974) Gene Hall expressed similar sentiments in his paper, "The Concerns Based Adoption Model":

> Suffice to say--we need much more knowledge about variables that facilitate or impede the adoption of educational innovations, and we need many more practical tools that change agents can employ to facilitate adoption." p. 2,

Research having an "action purpose" was also one of the major premises of Kenneth Leithwood's "Revised Model of School Change" (AERA, 1974). Quoting Chin and Downey (1973), he pointed out how underdeveloped the

literature was in "Type A Knowledge...(that is)

> ...basic knowledge focused toward intervention and deliberate intentional and planned change. It is a set of selectively retained tentatives based on theory and research on how to bring about change, and it has an action purpose."
> p. 2, Leithwood, 1974

Not only do we need to know more about which change strategies work and which do not, but we need to attend more to the "unique characteristics of the school system in contrast to other kinds of systems." (Leithwood, 1974) Many change models are concerned with other environments, (i.e. agricultural innovations: Wilkening, 1953, 1963; Rogers, 1962, 1969) or organizations (Lewin, 1949; Lippitt, Watson, and Wesley, 1958; Mann and Williams, 1960; Havelock and Benne, 1967), which are difficult to adapt if not downright irrelevant to school systems. (See Pincus, 1974) Some change models (Social Interaction of Havelock, for example) don't focus on the organization at all but rather at the individual as the user or adopter of an innovation.

Nature of this Study

The purpose of this tudy, "What Makes Innovation Work in Massachusetts?"* is to address some of these concerns and fill in some of these gaps. It seeks to obtain "more knowledge about variables that facilitate or impede the adoption of educational innovations," (Hall) and in so doing arrive at some realistic strategies that local and state change agents can use to

*The complete study is entitled "What Makes Innovation Work in Massachusetts?" Will be published in April, 1975.

facilitate innovation. It aims to test established diffusion theories (Havelock, Chin, Rogers et al) through the Massachusetts experience, and thereby either validate established models or suggest a new model of change. It also tests the personal theories of individual state and local diffusion leaders (some of which have become widely practiced), to discover how applicable they are. And it compares innovation in 1974 with earlier strategies to determine whether the changing economic and social picture makes some previous theories less relevant.

The Sample

The subjects in this study were 12 ESEA Title III innovative programs representing a 31.5% sample of the total 38 ESEA Title III projects funded in Massachusetts for the three year period 1971-74.* This population was chosen because it was the first group of projects to be selected and funded completely by the Massachusetts Department of Education contrary to the prior funding process administered directly from Washington. Hence, the projects represented the state's first efforts to influence directly the degree of diffusion that would take place at the end of three years. In addition, all 38 people were in their third year of funding at the time of the study making it possible to determine the degree of adoption that would take place in 1974-75. (See APPENDIX I for a comparison of sample and population.)

Projects were grouped into three strata representing range of adoption/local support from 0% - 100%. Preliminary data was collected on (1) the amount of in-kind and dollar support each project had received over the three years from the local district, and (2) projections of local takeover in 1974-75. Group I--Not adopted included all programs that had either been entirely discontinued or were continuing with absolutely no local cash support: Group II--Semi-Adopted-encompassed programs that were continuing on a smaller scale with local funds. (Or at the same rate with supplementary assistance from other state, federal, or foundation sources.) Group III--Adopted--included programs which the local districts were supporting at the same level or greater than was initially backed by federal funding.

*The 12 projects covered a total of 87 school districts which is 22% of all the districts in Massachusetts.

A stratified random selection was then made of the 12 programs to be used in this study. The number of projects was proportional to the number in each cell.*

Variable Areas

The dependent variable for the study, the level of adoption, was chosen for two reasons: (1) from a financial point of view adoption was readily quantifiable (the 30--60% local support required by state regulations could be easily calculated); and (2) local adoption is the main criterion used by the state and federal education agencies to judge the success of an ESEA Title III project.

A list of 23 dependent variables was determined from preliminary interviews and a review of the literature. These made up the 29 hypotheses which can be found in Appendix II. Variables were grouped in six main areas as follows:

1. The Environment--Some Characterisitics of the School and Community:

   Socio/economic information-median income, major profession; school budget information-amount spent per student, number of specialists in the system, professional days for personnel, etc.; whether district had a Title III project before and if so whether it was adopted.

2. Installation of the Innovation--Origin and Development:

   Who began the program, whether or not diffusion leader was involved in the early states, amount of district support, whether there was a need for the program, assessment?

*Later the numbers shifted somewhat because of the changing commitments of the school districts, making an even distribution of 3 in Group I; 3 in Group II; and 6 in Group III. Group III was originally divided into two groups--continuation at the same level and continuation at a greater level. For purposes of data analysis, the two were later collapsed.

3) Trial Period--The Operation of the Program

Extent to which the program achieved its objectives, evaluation findings, visibility and tangibility of program, programmatic design.

4. Trial Period--School System Support

Extent of support--financial, moral, time and resources; dissemination; involvement of decision makers; diffusion of activities throughout districts.

5. Trial Period--State Department of Education Support

Nature and kind of support; assistance in diffusion.

6. Trial Period--Leadership Style of the Diffusion Leader

From inside or outside the district; experience in program area, management ability, leadership ability, flexibility, etc.

A list of these areas and the data sources can be found in Appendix III.

Data Collection and Analysis

Data were collected in a variety of ways.

1. Program Interviews: Five individuals connected with the project were interviewed--a diffusion leader, a project staff member, the Superintendent of Schools, a user, (a participating teacher, administrator, parent, or student), and the appointed state liaison working with the program.

2. Questionnaires: Diffusion leaders and superintendents of schools completed a fact sheet on financial and demographic characteristics of their respective programs or districts; questions on the role of the state were completed by the diffusion leaders.

3. Checklists: Each of the five individuals mentioned in #1 above described the program by selecting from a list of 30 ERIC descriptors.

4. Evaluation Reports: All evaluation reports connected with the programs were read and rated by a team of researchers to gauge how well the program achieved its objectives.

5. Proposals and Continuation Grants:

   The original proposals and continuation grants were read and analyzed for range and scope of objectives.

6. Historical Data: Monthly program progress reports completed by the diffusion leaders and state reports completed by the liaison were read and analyzed for progress and problems.

7. Census Tract Data: Median income, occupations, etc. were collected on the individual communities. (In the case of collaboratives, it was collected on the LEA**the district acting as conduit for funding).

8. Adoption Data Sheets: In June, 1974, the superintendents of schools completed data sheet on the extent of financial takeover of the programs for 1974-75.

Instruments were piloted in two programs--one single and one multi-districts--and revised over a three-month period. Interviews were conducted in the spring of 1974 and the remainder of the data was collected and analyzed in the summer and fall.

Frequencies were obtained for all interview items. Tests of association (Chi Square) and comparisons between means (t-tests) were performed on appropriate data. The Contingency Coefficient (C) was used on statistically significant Chi Square data to provide a measure of the degree of correlation.

Findings

The study found that the variables most strongly related to the adoption of innovations clustered in three main areas.

I. Systematic Planning, Implementation and Evaluation of Objectives

The first major area is that of systematic planning, implementation and evaluation of objectives. According to all evaluation reports and to the opinions of users and decision makers alike, adopted programs met their objectives to a significantly greater extent than did non adopted programs. They tended to have spent longer in careful planning of the program* (Clark & Guba, 1965) and to have had some pilot experience and expertise in the program areas of the project than did non adopted leaders. And the objectives of adopted programs were more realistic/achievable, more compatible (Rogers, 1971) more tangible (easy to understand and to explain), and more visible (effecting observable changes in the user) than were the objectives in the non adopted programs. As a result, users felt more satisfaction from their participation in the adopted programs than did users in the non adopted programs. Furthermore, non users and decision makers alike could see and understand more clearly the achievements in the adopted programs.

Changeability

Systematic planning and implementation were also demonstrated in the variable of changeability. Adopted programs needed to change their objectives less frequently in order to operate successfully than did the non adopted programs And while the latter group found they were frequently shifting entire directions sometimes because of negative feedback from school and community, the program changes in the adopted group were frequently made to expand an activity because it was so

*as did non adopted leaders to a significant extent.

positively received. (like working with an additional school or more teachers etc.) In fact, by the third year of operation, most of the adopted programs had expanded by far to the greatest number of schools and districts.

Evaluation

An important part of this systematic planning and implementation process was the use of periodic evaluation to measure progress. Adopted programs relied significantly more on systematic evaluation to achieve their objectives--both the sponsored annual on-site visits and internal project evaluators--than did the non adopted programs. Staffs and diffusion leaders alike were more positive in their endorsement of evaluation as a useful tool in their programs' operations. In fact, leaders of the adopted programs were found to be somewhat more open to suggestion/evaluation and significantly more flexible than were non adopted directions.

II. Network Building--Early and Widespread Dissemination and Involvement

The second main area of findings is that of systematic dissemination and involvement of decision makers and opinion leaders begun in the planning stages and continued throughout the program's operation. Havelock calls it "Network Building" and in his recent study of U.S. School Districts (11) showed the significance of participation and

*The importance of evaluation is supported in the literature by Rogers and Shoemaker (1971), Miles (1969), Clark and Guba (1965), and Havelock (1973). In his recent study, however, Havelock found systematic evaluation "was slightly but significantly related to (innovation) in a negative direction." (p. 15)

involvement by school and community leaders. (AERA, 1974) Kenneth Leithwood pointed out in his "Revised Model of School Change" (23) how important effective communication was to the innovations he studied. And Rogers (1971), Miles (1964, 1969) and Leppett (1958) among others have repeatedly stressed the key nature of dissemination. So these findings are no exception.

Adopted programs in this study were found to employ many of the usual means of dissemination to their district--articles, newsletters, reports. But what differentiated their approach from the non adopted and from some of the research findings eg. (R.D. & D. Model Approaches) was-the frequent and early use of person-to-person contacts. Diffusion leaders and staffs had far more informal contact with district decision makers than did those of non adopted programs from the early stages on. They tended to make more personal presentations to school committees and supportive and non supportive and school groups alike. In the adopted programs, opposition was diluted through involvement. In the non adopted, it was frequently polarized through avoidance. Hence, there was a significant difference between adopted and non-adopted programs in the part this total dissemination effort played in moving them towards their objectives.

Building a Self-Renewing Capacity

The purpose of dissemination is to win support in order that the program will eventually become part of the district routine. The study found that efforts towards institutionalization or routinization

of the adopted innovations (Miles, 1969) began as early as the planning stages. They obtained more financial, as well as time and resource support from the school district even prior to funding than did the non adopted programs. Furthermore, maintaining and increasing this support throughout the operation of the program was true to a significant extent for the adopted programs.

Related to this finding was another variable--that diffusion leaders of adopted programs were significantly more empathetic than those of non adopted. Rogers (1971) points out how this quality is important in order that the leader can empathize with clients. It is also probably true that the ability to empathize with the difficulties change causes individuals was the quality which facilitated leader contact with decision makers.

III. Diagnostic Inventory--Need vs. Support

The third main area of variable findings fall into the general area of the diagnostic inventory that constitutes the early planning of an innovation. In ESEA Title III funded programs, this early diagnosis takes the form of a needs assessment survey, whereby a need for the program is ascertained in that particular district. The necessity of establishing a need for an innovation is also part of the Problem Solving Models (Lippitt, Watson and Wesley, 1958; Lewin, 1961) and of the recent Havelock and Leithwood findings (AERA, 1974).

This study found, however, that very few of the adopted programs actually began from a felt need in the school system. Furthermore, there was no correlation between doing a needs assessment at the beginning stages and later adoption of a program. Most of the innovative programs including the non adopted were seen to come into being because a few individuals thought the idea had merit.

In truth, the study found few hard and fast rules about the origin stages of the innovations. Findings showed that early diffuser leader involvement was not related to later adoption (contrary to Miles, 1969; Rosenau, Hutchins, and Hemphill, 1973). Nor was the involvement of large groups of school individuals. Data did not show it key that the superintendent be the initiator (Carlson, 1965), nor that the initiator be either from within the school system or come from outside. (The outside change agent is held by Rogers, 1971; Havelock, 1973; MacKenzie, 1964) Furthermore, neither the socio economic makeup of the community (high median income, professionalism) nor a high per pupil expenditure were related to later adoption. (In disagreement with Mort (1964) and Rogers, 1971.)

Early Diagnosis

The data indicated a few generalizations can be made about the early diagnosis of an innovation. It showed that while not wealthier, adopting school districts tended to be more open and flexible in their attitudes towards their personnel. Almost all of the adopting districts had adopted an ESEA Title III program prior to the current program and

none of the non adopting systems had. It showed that more important than the role of the initiator (diffusion leader, superintendent etc.) was the credibility the individual possessed in that school district. Data showed that early support is more important than early need for a program. And, perhaps most importantly, the compatibility of the innovation itself with the values of the school system affected (i.e. how radical the proposed change was) not only the beginning but all phases of its development. (Rogers, 1971) Radical innovations were not adopted.

The Massachusetts Model

Phase I -- Installation--Origin and Planning Period

1. Diagnostic Inventory -- Assess climate for change and decide on overall program goals.

2. Systems Analysis -- Formulate program objectives

3. Diagnostic Inventory -- Test reaction to program in school community.

4. Dissemination -- Spread idea to key decision makers/ opinion leaders.

5. Network Building -- Procure needed support from school system decision makers. Early diffusion

6. Staffing -- Select diffusion leader/staff.

7. Diagnostic Inventory -- Obtain needed state/federal financial support if necessary.

Phase II -- Trial Period--The Operation of the Innovation

8. Temporary System* -- Pilot/experiment with activities.

9. Dissemination* -- Involvement of key decision makers/ opinion leaders/users/non users.

10. Evaluation* -- Evaluation/revision/adaptation.

11. Routinization -- Institutionalization--movement from temporary to permanent system

(Note: This cycle (8,9, and 10) may be repeated until trial is successful)

The Massachusetts Model (cont.)

Phase III -- Adoption Period

12. Routinization* -- Final institutionalization/incorporation of program activities into system operation.

Note: This phase may give rise to another installation phase as program activities point out unsolved problems and new areas for investigation.

Recapitulation--The Massachusetts Model

The model of school change that is suggested from these findings, then is an amalgam of many. It contains the lengthy pre-operation diagnosis (of support if not actually need) of the Problem-Solver Models, the systematic planning, implementation, and evaluation of objectives of the RD & D models, and the attention to role relationships of the Social Interaction be paid to the change environment as to the innovation itself. In looking at the model we will examine some of the organizational realities which underline each construct. We will then present the strategies that are suggested from this discussion. Finally, we will examine the role of the state - that part it played and the part it could play in supporting planned change today.

Diagnostic Inventory

The study found that establishing early support is more related to later adoption than ascertaining a need for the innovation itself. This does not mean to imply that all innovations are unrelated to need. Rather it says that given the relatively short-term nature of federal funding process which has been the basis of this study) the probability of there being a deeply felt need for an innovation is slim indeed. It seems more realistic to look for some early support or consensus about the workability of the planned change within the realities of the particular school district. Furthermore, as John Pincus points out in his article on "Incentives for Innovation in the Public Schools," (32) it is widely accepted that school districts characteristically see federal aid money as unreliable--"soft money"--...and hence "refuse to

use...(it)...as the basis for any substantial long-run changes in ways of doing business."* (p. 127) This fact, coupled with an organizational characterisitic of school systems which Miles and Schmuck (37) point out as "ambiguity and diversity of goals," would seem to imply that the reality of there being a need for one particular federally funded program over another is slim indeed.

Data also showed that "radical innovations" weren't adopted (see Appendix II), and that those changes which were absorbed came from school districts which tended to be more flexible and professional with its personnel, hence, it would be important to match the level of planned change (modest to more radical) with the ability of the school district to respond. For example, it may be tempting to introduce drastic changes in a very ritualistic and conservative community, but the possibility of the change ever taking hold would be slim indeed. Furthermore, given the poor performance data available on innovations, as John Pincus points out:

> Why should the public endorse or the schools adopt, at considerable travail, new methods that will create political and institutional problems, when the resulting prospects for school improvement are so uncertain? (p. 138)

Given these organizational factors the following strategies are suggested for a diagnostic inventory.

*Note: This might be a reason why many adopted programs come from districts having already adopted a Title III program in the past.

Strategies for Diagnostic Inventory Construct

1. Assess the school district climate for change (openness)

   Look at openness to change in the past (did it have a previous Title III project for example?); how much it encourages teachers and other school personnel to try new things, attend conventions, conferences, visit other classrooms etc.; flexibility in bureaucratic value structure.

2. Weigh the credibility of the initiators within the school district.

   How well received; whether or not seen as "elite" or one end of a polarity; ability to bring people together in a spirit of harmony; flexibility and openness to new ideas; expertise in area of innovation.

3. Ascertain support for innovation within the school community.

   Survey willingness to participate (on part of teachers, principals etc.), interest and involvement of opinion leaders and decision makers; identify forces against planned change and weigh influence in the community; test willingness to support innovation with time and money etc.; Assess political climate; economic values.

Systematic Planning, Implementation, and Evaluation of Objectives.

The study also found that the objectives of the innovation, besides being compatible with the school system, should be systematically planned, implemented and evaluated. They should be realistic in light of time and numbers served, tangible in being easy to explain and be understood, and visible in that the changes can be seen and not just described. Furthermore, the objectives should be periodically evaluated. As Watson and Glaser point out what this study found:

> Part of any program of change should be a procedure for periodic review and revision. Again, the role of the members of the organization is vital. By inviting them to participate in the review, we deepen their commitment to the enterprise. If they know that the experiment has been inaugurated with the intention of re-evaluating it after a reasonable period of trial, they will accept some initial inconvenience, aware that they will have a chance to air their complaints and to modify their program.... (p. 36) (38)

It is not so much that decision makers and opinion leaders will be rationally persuaded to support the program by positive evaluation findings. Researchers repeatedly show to their dismay how totally unaffected school administrators are in making decisions by data findings. And furthermore, as this study shows, the most support for the planned change effort frequently comes from other strategies like dissemination.

Rather, it appears that school systems have grown weary of "projects"--innovative and otherwise, federally or locally funded. The changing economic picture has made financing too many programs in one district untenable. And the shifting social values have brought suspicion of educational frills.

Hence, districts want programs that "make sense", that they can see the results of, and that they can trust are being held accountable by state and local evaluation procedures. There is little patience to flounder with programs that cannot clarify their goals and directions in a relatively short period of time. The following strategies are suggested for this construct:

Strategies for Systematic Planning, Implementation and Evaluation of Objectives

1. Formulate program objectives early in the planning that are realistic, visible, tangible, and compatible.

   Clarify numbers of users; realistic time line for achieving objectives, reasonable activities that can be carried out given the time, facilities and resources available; balance skill training with attitude change; develop objectives that are reasonably simple and easy to understand; tie in with system values and priorities wherever possible; construct realistic budget.

2. Identify staff with expertise to carry out objectives.

   Obtain diffusion leader with expertise in area of program- may be from inside or outside the system-should have interest in evaluation; identify staff with supportive skills- utilize district personnel wherever possible.

3. Establish plan of evaluation.

   Identify/obtain evaluator for internal evaluation of program; someone informed but not personally invested in the program. Identify goals of evaluation design; confer with staff, state, system decision makers, opinion leaders, users for input into this; establish time line for feedback; balance quantitative and qualitative evaluation; establish state evaluations time line and work into feedback schedule.

4. Pilot/experiment with activities.

   Try out activities on a small scale with built-in evaluation; alter objectives on the basis of feedback before trying on a full operational basis. (This may be done more than once)

Network Building--Early and Widespread Dissemination and Support

The other key area of findings of this study was that of network building--obtaining the early involvement and support of opinion leaders and decision makers in the district. The purpose of such efforts was to move the innovation towards institutionalization/adoption by the school district. Ronald Havelock summarizes this overall goal of all innovative efforts:

> It should become a routine part of everyday life for the client...embedded in its everyday behavior. For this to happen, the innovation must also be integrated within the existing structure; there must be room for it. Provision must be made for people to have time to use it. The willingness of the leaders to make room for an innovation is probably the best index to their real attitudes toward it regardless of the lip service that is paid toward accepting it. (13) p. 135.

In this day of paring school budgets to essentials, it is not easy or reasonable to speak of adopting costly innovations. Hence, it is absolutely essential for the leaders of an innovative program to begin disseminating their efforts and obtaining necessary financial support even in the planning stages. "Lip service" is indeed not enough, since it was the non adopted programs that received the most verbal support in this study.

Analyzing the decision-making structure of the school system, identifying the opinion leaders, establishing early person to person contact with these individuals as well as with possible opponents of the idea are all essential steps in beginning planned change. Most of all, the extent of the early financial commitments and institutional adjustments (changes in schedule etc.) that a system is willing to make

clarify early its level of commitment to the innovation,

The following strategies are suggested for this construct:

1. Network Building*

   Identify early in process, opinion leaders and decision makers critical to the innovation; establish early person to person contact; explain objectives of program- just keeping the person informed etc.) Invite to participate.

2. Dissemination to opinion leaders/decision makers/users/ non users.*

   Employ all means--newsletter, pamphlet, radio, word of mouth, newspaper, formal and informal presentations, visits, calls etc.

3. Procure needed support from decision makers. Increased Institutionalization*

   Obtain financial support; time and resources of school personnel; changes in scheduling; released time for teacher or other users; commitments of administrators to allow for program activities; inservice time devoted to program activities; keys to buildings; buses; inservice credit; certificates; visits from decision makers; encouragement of participation (at meetings etc.) by decision makers.

*Note: (Each of these should be begun at the outset and continued throughout the duration of the program.)

State Educational Agency

While the study found that adopted programs felt more positively about the state's involvement in their innovations than did the non adopted, it did not find the state variable key to the actual adoption process. The state agent* working with the programs was most frequently described as "helpful in listening to problems." "a facilitator of the bureaucracy," and "a demonstration of state support." Seldom, did the state liaison actively assist with those aspects of program development seen as key to adoption--dissemination, systematic program development and evaluation, and diffusion institutionalization.

Administrative Procedures

The state's main contribution to the diffusion of its ESEA Title III programs was in some of its administrative procedures. For one, project budget guidelines required a minimum of 10% set aside for evaluation and dissemination. Frequently, programs did not see the value of this expenditure until half-way through their operation. And as the study showed attention to these variables was frequently tied to later adoption.

Secondly, the state provide annual on-site evaluations of all projects which both staff and state saw as very helpful in moving them towards their objectives. Sometimes the spin off benefits

*Each ESEA Title III project was assigned a state liaison for the three years of its operation. The purpose of this individual was to give assistance and support as well as to monitor and evaluate the project.

of such two day efforts exceeded its evaluative functions as on site team members frequently followed up their visits with various dissemination and diffusion activities of their own.*

Perhaps of greatest long range benefit to the programs, however, was the Massachusetts Title III policy of providing declining federal support to programs--100% the first year, 70% the second, and 40% the third--and requiring local districts to provide the difference. The study found that the variable of local financial support was one of the strongest indicators of eventual adoption.

Why

There may be many reasons by why the state did not play a more central role in promoting the adoption of innovations. It might have been that some administrative procedures besides being helpful, could prove to be burdensome in other instances. The time it takes to establish procedures--reporting forms, budgeting proposals, on site, and the like--is valuable time that could be perhaps better spent with the programs themselves.

Another reason might have been that the state agent might not have developed the professional expertise in program development, evaluation, or dissemination in order to provide kind of assistance to the programs they needed. Occasionally too, state liaisons had to work both with innovations in which their education and experience was

*For example, an on site team member of a university faculty helped establish a liaison between the two: using the program as a field study and providing graduate credit to users. Another on site team member, a Superintendent of Schools, saw the program as helpful to his district after an evaluation experience.

more limited and with diffusion leaders in which there were rapport difficulties. Limited state staff and the bureaucratic pressures that characterize such agencies made inservice training or a careful matching of personality, expertise, and program area concentration a lower priority. Perhaps most importantly, however, was the fact that the state Title III office did not see its role as being so central to the adoption of its projects. It saw itself instead as being a linker between the federal government and the local districts, a facilitator of the means for encouraging change--providing financial support, seed money, funds for experimentation as well as emotional support.

A More Active Role?

It would seem that in order for a state or federal education agency to make a real difference in planned change efforts, it would have to play a much more active role in promoting and supporting educational innovations throughout the state than it did with these programs.* It would have to develop clear and consistent policies toward innovation in which, as John Pincus points out, (32) there would be "a clear long-term benefit or penalty to a district if it adopts or fails to adopt one set of innovations in preference to another." (p. 127) The present inconsistency on both levels (state and federal), Pincus goes on to say breeds "a certain cynicism as

*Under the present Commissioner, Gregory Anrig, there have been more active efforts to promote change in identified areas. eg. occupational competency for one. Directing funds to state needs is a priority of Commissioner Anrig's. Without some of the supportive strategies suggested in this paper, however, such policy may fall short of its goal.

to the merits of serious efforts at innovation" and encourages "a strategy of grantsmanship" in school systems.

Districts know that both federal and state agencies are reluctant to support hard alternatives in education. (32) (See Pincus) In fact, this policy of "isolated and safe innovations" is consistent with their own bureaucratic value system as well. And since there is no penalty one way or the other regarding adoption, what exists frequently is a series of "pet projects," "fads" or the like which fail to move either the district or the state in any consistent way forward in a program of planned change.

State-wide Diagnostic Inventory

The state educational agency should be doing what it requires of the local districts--taking a diagnostic inventory, developing systematic program objectives, and obtaining the legislative support necessary to institutionalize the planned change into the educational system.* Only then can the state begin offering incentives to districts who attempt more widespread change efforts, for example, supporting the efforts beyond the three years or using as a demonstration model for the rest of the state. It would mean making some hard decisions about district capability for change. It would mean readjusting some

*A recent Rand study (34) supported this point. It found that in those states where there was no established ESEA Title III program goals, there the state role was primarily administrative, there was no concomitant state legislative commitment to innovation.

priorities and values in the bureaucratic hierarchy of the agency. It would mean working with state as well as district personnel and provide rigorous inservice necessary to carry out such objectives. But in the long run, it may mean the difference between real innovation and faddism in the school systems throughout that state.

What are suggested on the basis of these data and observations then, are the following state strategies.

1. Establish program goals--state priorities for innovation.

   Ranging from the more radical to the less; look for goals that are realistic, tangible, visible, and compatible.

2. Assess the climate for change in school districts

   Look for degree of openness and professionalism; how encouraging of innovations, history of change, commitment/ continuation of innovations in the past.

3. Assist school districts with campatible innovations in the planning stages.

   Provide technical expertise in program development, dissemination, network building, evaluation etc.

4. Begin Network Building and Dissemination of Innovations on state wide level.

   Identify network of opinion leaders and decision makers; keep in informal and formal contact through various means of dissemination.

5. Obtain necessary support from state opinion leaders and decision makers.

   Financial support for innovation; time and resource support; changes in legislation; other commitments etc.

6. Provide inservice training for state staff where necessary.

   Training in areas of proved importance to the adoption of innovations--evaluation, program development, dissemination, network building, diffusion, etc. Reduce bureaucratic encumbrances to make time for such.

7. Build

7. Build a self-renewing system.

   Obtain state financial and legislative support to provide incentives for districts attempting difficult innovations (for longer than federal funding period or supporting as diffusion models).

Summary

This discussion has summarized the results of a study of the diffusion of innovation in Massachusetts--an examination of some variables that are related to the adoption of ESEA Title III projects by school districts throughout the state. It has tested established theories against current practices in order to provide data about "what's really happening at the implementation level," as opposed to what "ought to be going on." (Miles)

It has outlined strategies based on these findings which can serve as guidelines for diffusion leaders, local districts, and state agents interested in implementing innovation. In particular, it has addressed some of the unique characteristics of school systems, state agencies, and federally funded programs alike in order to arrive at constructs which constitute a workable model of planned change today.

In summary the constructs are the following:

1. Diagnostic Inventory--Need vs. Support

   Assessing the climate for change, the support for the innovation, and the credibility of the initiators.

2. Systematic Planning, Implementation, and Evaluation of Objectives

   Rigorous program planning, staffing, and evaluation geared toward the successful implementation of objectives.

3. Network Building--Early and Widespread Dissemination and Support

   Planned strategies of dissemination and diffusion.

The implications of the study findings and the suggested strategies for state and local systems are many. Some of these are:

1. That innovations can no longer languish as separate entities in any one stage of development but must be systematically planning routinization at the origin phase.

2. That greater expertise in program development, dissemination, and evaluation is necessary for an innovation to survive today. School systems are unwilling to tolerate loosely conceived and executed change efforts.

3. That some procedures like needs assessments, monitoring functions, etc. should be reexamined for their real contribution to the adoption of federally funded programs/ and non federally funded.

4. That there are differences between federal/state funded innovations and other planned change efforts, i.e. shorter start up time, limited operation period, automatic cutoff of funds, which require somewhat different strategies.

5. That the state educational agency can play a much greater role in promoting change but it would have to be willing to assume a stronger leadership role and readjust some deeply held institutional values.

APPENDICES

APPENDIX I. . . . . .Comparison of Study Sample with Original 38 ESEA Title III Projects funded 1971--1974.

APPENDIX II . . . . . .Hypotheses Used in this Study

APPENDIX III. . . . . .Variables and Data Sources

APPENDIX IV . . . . . .A. The Effect of Study Innovations on School Operations.

B. The Effect of Study Innovations on the Number of School Districts.

APPENDIX I

TABLE-COMPARISON OF STUDY SAMPLE WITH ORIGINAL 38 ESEA Title III PROJECT '71-'74

ADOPTION RATE

	I Non-Adopted	II Semi-Adopted	III Adopted	
original 38 Projects	18%	26%	56%	N=38
Sample 12 Projects	25%	25%	50%	N=12

$\chi^2_2 = 1.4182 \quad (p > .05)$

APPENDIX II

HYPOTHESES USED IN THIS STUDY

H_1 -- A high rate of adoption of innovations is not necessarily tied to communitied/school systems that are wealthy and of a higher social status. (supported)

H_2 -- A school system which is seen by its members as being open to change and flexible in its role expectations (less bureaucratic and rigid) is more apt to adopt an innovation than one which is not seen this way. (supported)

H_3 -- A school system which has already demonstrated a willingness to adopt innovations in the past is more apt to continue to do so than one which has not. (supported)

H_4 -- If the idea for the project was generated from within the school system, that project is more apt to be adopted than one which was generated from outside. (inconclusive)

H_5 -- A project which was motivated primarily by many people within the school community has a better chance of being adopted than one which was motivated mainly by the central administration or a single party. (not supported)

H_6 -- A project which involved the director in its origin and development has a better chance of being adopted than one which did not. (not supported)

H_7 -- A project does not have to originate from a need in the community to be adopted. (supported strongly)

H_8 -- A project which began with a pilot effort before federal funding has a better chance of being adopted than one which did not or which tries to radically change a negative trend. (tends to be supportive)

H_9 -- A school system which provided support (financial, time and resources, moral) to a project in the beginning stages as well as throughout, is more apt to adopt a project than one which did not. (½ supported-financial)

H_{10} -- A project which has by most evalution standards (on site evaluation reports, internal project evaluations) achieved its objectives is more apt to be adopted than one which did not.
(significantly supported-internal)
(on site-tends to support)
(evaluation data-supports)

H_{11} -- A project which relies on evaluation to assist with its progress is more apt to be adopted than one which does not (significantly supported)

H_{12} -- A project which has adhered relatively closely to its original objective is more apt to be adopted than one which has frequently changed goals in sometimes major ways. (supported)

H_{13} -- A project whose activities result in some visible or observable change in the participants is more apt to be adopted than one whose activities result is more subtle (less visible) changes. (tends to support)

H_{14} -- A project which is fairly easy to explain (and is fairly well understood) is more apt to be abpted than one which is not. (tends to support)

H_{15} -- A project which involves the school system administrators as well as teachers in its efforts (dissemination) so that they are strongly identified with the Title III efforts is more apt to be adopted than one which remains more isolated. (significantly supported)

H_{16} -- A school system which provides support (financial, time, resources and moral) throughout the operation of the project is more apt to be adopted than one which does not (supported--strongly)

H_{17} -- A project whose activities by year 3 are already partly routine in the system has a better chance of being adopted than one whose activities are seen as tangential and peripheral to the system. (supported)

H_{18} -- A project whose staff and superintendent perceive the relationship with the state Title III office as more positive than negative or neutral has a better chance of being adopted than one who views it in a negative way. (tends to support)

H_{19} -- If the director has worked in the community prior to the development of the innovation, the project has a better chance of being adopted than if he/she is completely unfamiliar with the community. (not supported)

H_{20} -- If the director has the expertise in the subject area of the project, that project has a better chance of being adopted than one in which the director has to rely on others for this expertise. (supported)

H_{21} -- If a director is skilled in management (clear about goals, long range planning, able to make decisions), the project is more apt to be adopted than if the director lacks these skills. (not supported)

H_{22} -- If a project director is very persuasive (influential, a good salesman for the project), that program is more apt to be adopted than if she/he is not. (not supported)

H_{23} -- If a director is actively involved in a number of professional organizations, that project is more apt to be adopted than if she/he is not. (supported)

H_{24} -- If a director feels a sense of autonomy and independence in carrying out the activities of the project, that project has a better chance of being adopted than if he/she does not. (not supported)

H_{25} -- If a director is open to evaluation and is flexible, the project is more apt to be adopted than if the director is not. (supported in part; flexibility significant supported)

H_{26} -- If a director is empathetic and supportive, the project is more apt to be adopted than if she/he is not. (significantly supported)

H_{27} -- If a director is able to lead effectively (able to delegate responsibility, coordinate roles, etc.), the project is more apt to be adopted than if she/he is not. (not supported)

APPENDIX III

VARIABLES AND DATA SOURCES

Variables	Diffusion Leader	Project Staff	Superintendent	State Supervisor	Program Users	Census Data	Evaluation Reports Proposals Historical Documents
(1) CHARACTERISTICS OF THE COMMUNITY							
School System						X	
Socioeconomic						X	
Urban, Rural Suburban							
Openness/History of change	X		X	X	X	X	X
(2) INSTALLATION - the Origin and Development							
Need to community for project? -why the project	X		X				
Diffusion leader involvement			X				
Who originated program?	X						
Early school system support?							
Pilot Effort	X		X				
(3) OPERATION OF PROGRAM							
Adherence to original goals	X			X			X
Amount of change in goals	X			X			X
Visibility of goals	X	X	X	X			X
Tangibility of goals (how well understood)	X	X	X	X	X		X

	Diffusion Leader	Project Staff	Superintendent	State Supervisor	Project Users	Census Data	Evaluation Reports Proposals Historical Documents
Data on objective achievement	X			X	X		
Measurability of goals.	X			X	X		
(4) SCHOOL SYSTEM SUPPORT	X		X	X			
Support for innovation-	X		X		X		
financial			X				
Personnel Moral	X						
Involvement of School System in Project	X		X		X		X
Early Support	X		X				X
Later Support	X		X				X
Dissemination	X		X		X		X
(5) STATE TITLE III SUPPORT	X		X	X	X		
Kind of support evaluation technical help?	X	X		X			
Frequency of Support.	X			X			
(6) DIFFUSION LEADER							
Leadership style Administration Evaluation Persuasion Flexible	X	X	X	X	X		X
-Autonomy	X	X	X	X	X		X
From inside or outside community	X	X		X	X		X
Cosmopolite	X	X	X	X	X		X

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